

REMARKS

Claims 8 and 9 have been newly added. Claims 1-9 are pending in the application. Applicants reserve the right to pursue the original claims and other claims in this and other applications.

Claims 1-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,241,472 (“Bosch”) in view of U.S. Patent No. 4,209,259 (“Rains”). This rejection is respectfully traversed.

Claim 1 recites that “the processing unit (12) comprises a stationary inner part (14) and, rotatable about this, an outer part (15), the inner and outer parts having the shape of substantially concentric rings (16, 17) arranged with a close fit to each other and having a plurality of through shearing recesses (18) opposing each other, wherein the outer part (15) is the furthest part from an axis of rotation of the outer part (15) in a direction perpendicular to the axis of rotation.” The cited references, alone or in combination, do not render this limitation obvious.

The Office Action acknowledges that, in the rotor-stator assembly 36 of FIG. 3 of Bosch, “the outermost ring of the stator is more outward than that of the rotor.” (Office Action, page 3). The Office Action states that “teachings of alternatives such as Fig. 20 versus Fig. 21 [of Bosch] would convey to one of ordinary skill in the art that either the rotor or the stator could have the outermost portion.” *Id.* Applicants respectfully submit that it would not be obvious to combine features of the rotor-stator assembly shown in FIG. 20 with the rotor-stator assembly of FIG. 3 because the rotor-stator assembly of FIG. 20 is fundamentally different from the rotor-stator assembly shown in FIG. 3 and Bosch does not teach or suggest that the features from these different rotors could be combined with a reasonable expectation of success.

While the rotor-stator assembly of FIG. 20 of Bosch does have a rotor 300 arranged outside a stator 316, the rotor 300 and stator 316 of FIG. 20 do not have any through recesses in the rotor 300 or stator 316 for cutting or shearing of particles. Instead, the rotor-stator assembly in FIG. 20 has a configuration with side walls and a top wall, through which no material or products may pass

and has material supplied to it through the center of the stator. Particles exit the assembly through a “shear zone” by passing over the stator and then under the rotor as shown by the arrows in FIG. 20, reproduced below. (Bosch, column 4, lines 30-31). Thus, the rotor-stator assembly of FIG. 20 does not teach or suggest “inner and outer parts...having a plurality of through shearing recesses (18) opposing each other,” as recited by claim 1. It should also be noted that the rotor-stator of FIG. 21 has a stator 402 located outside of a rotor 400 and therefore does not cure the deficiencies of FIG. 3 of Bosch, even assuming, *arguendo*, that they are properly combinable.

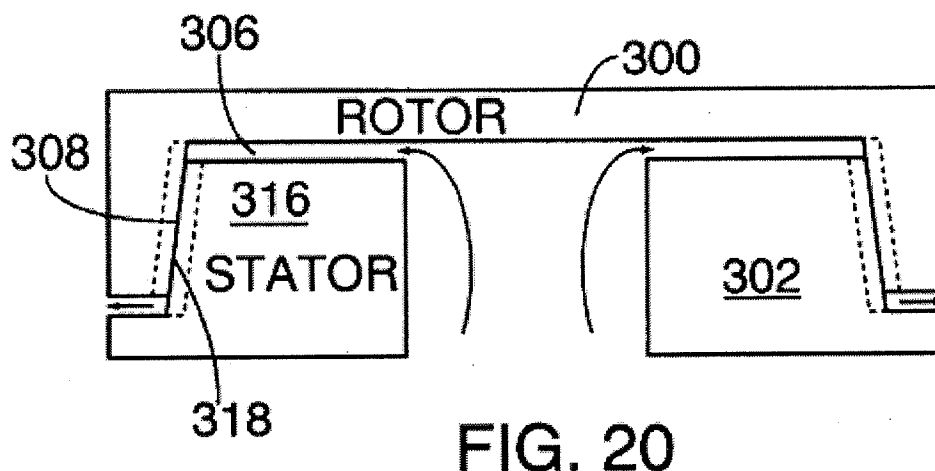


FIG. 20

The principle of operation of the rotor-stator assembly of FIG. 20 is fundamentally different from that of the rotor-stator assembly 36 of FIG. 3 of Bosch, which operates by forcing fluid through the rotor 38 and stator 40 using gaps in the rotor teeth 42 and the stator teeth 44. (See Bosch, column 1, lines 36-46; FIG. 3). As mentioned above, the rotor-stator assembly of FIG. 3 does not teach or suggest that “the outer part (15) is the furthest part from an axis of rotation of the outer part (15) in a direction perpendicular to the axis of rotation,” as recited by FIG. 1.

Because the rotor-stator assemblies of FIGS. 3 and 20 are fundamentally different in their principles of operation, there is no reasonable expectation that the rotor-stator of FIG. 3 of Bosch could successfully be modified to have the rotor arranged in the outermost position as shown in the

rotor-stator assembly of FIG. 20. Therefore, one of ordinary skill in the art would not be motivated to modify the rotor-stator assembly of FIG. 3 as suggested by the Office Action.

Furthermore, in the case at hand, the Office Action has not established a *prima facie* case of obviousness because the Office Action has done no more than demonstrate that various elements recited in claim 1 were independently known in the prior art in fundamentally different types of rotor-stators. *See KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) (“a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art”). Furthermore, the Office Action has not established a *prima facie* case of obviousness because the Office Action has not provided any reasoning or rational underpinning to support the conclusion that it would be obvious to rearrange the rotor-stator assembly of FIG. 3 of Bosch so that it is configured like the rotor-stator assembly of FIG. 20 of Bosch. *See Id.* (“rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).

Rains does not cure the deficiencies of Bosch because Rains only discusses a magnetically responsive agitator means disposed inside a vessel and does not teach or suggest a stationary inner part and an outer part rotatable about the inner part. (Rains, Abstract). Furthermore, as discussed above, the rotor-stator assembly in FIG. 20 of Bosch has material supplied to it through the center of the stator, and the rotor has a configuration with side walls and a top wall, through which no material or products may pass. Therefore, it would not be obvious to combine the rotor-stator assembly 20 of Bosch with the device of Rains, because doing so would make it difficult for material to enter into the assembly since the stator will be provided towards a wall of the vessel. (See FIG. 2 of Rains).

Since the Bosch and Rains combination does not render all of the limitations of claim 1 obvious, claim 1 is not obvious over the cited references. Claims 2-7 depend from claim 1 and are patentable at least for the reasons mentioned above. Applicants respectfully request that the rejection be withdrawn and the claims allowed.

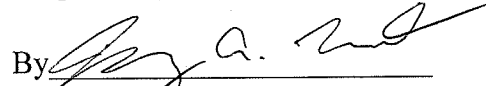
Claim 4 is dependent on claim 1 and further recites that “the ring (17) of the outer part (15) has a free end with a collar (21) over the corresponding free end of the ring (16) of the inner part (14) and in which the shearing recesses (18) in the ring of the outer part extend through the collar.” The Bosch and Rains combination does not teach or suggest this feature. The Office Action has characterized “one of the rings” of the rotor 38 of Bosch FIG. 3 as being an outer part and the “innermost ring” of the stator 40 of Bosch FIG. 3 as being an inner part. (Office Action, page 2). However, none of the teeth 42 of the rotor 38 of Bosch have “a free end with a collar...over the corresponding free end of the” stator. This is yet another reason why claim 4 is not obvious over the Bosch and Rains combination. Applicants respectfully request that the rejection be withdrawn and the claim allowed. Newly added independent claim 8 includes a similar limitation and is allowable for the same reason.

Claim 5 is dependent on claim 1 and further recites that “the ring (16) of the inner part (14) constitutes a part of a stator (22) with a bearing (23) and in which the ring (17) of the outer part (15) constitutes a part of a rotor (24), which is rotatably mounted on the bearing of the stator.” The Bosch and Rains combination does not teach or suggest this feature. The Office Action has characterized “one of the rings” of the rotor 38 of Bosch FIG. 3 as being an outer part and the “innermost ring” of the stator 40 of Bosch FIG. 3 as being an inner part. (Office Action, page 2). However, the stator 40 of Bosch does not include a bearing and the rotor 38 of Bosch is not rotatably mounted on any part of the stator 40. This is yet another reason why claim 5 is not obvious over the Bosch and Rains combination. Applicants respectfully request that the rejection be withdrawn and the claim allowed. Newly added independent claim 9 includes a similar limitation and is allowable for the same reason.

In view of the above, Applicants believe the pending application is in condition for allowance. Applicants respectfully request that the rejection be withdrawn and the claims allowed.

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